

TA-F445R

SERVICE MANUAL

AEP Model



SPECIFICATIONS

Amplifier

Continuous RMS power output (both channels driven simultaneously)

Model for Scandinavian countries, Switzerland, Spain and Portugal

DIN, 1 kHz	8 ohms	60 W + 60 W
20 Hz - 20 kHz	8 ohms	50 W + 50 W

Model for other countries

DIN, 1 kHz	4 ohms	75 W + 75 W
	8 ohms	60 W + 60 W
20 Hz - 20 kHz	8 ohms	50 W + 50 W

Input

Input jack	Jack type	Sensitivity	Impedance
PHONO (MM)	Phono	2.5 mV	50 kilohms
TUNER, CD, AUX, TAPE 1/DAT, TAPE 2/MD	Phono	150 mV	50 kilohms

S/N

PHONO (MM) A, 5 mV	76 dB
TUNER, CD, AUX, TAPE 1/DAT, TAPE 2/ND	100 dB

Output

Output jack	Jack type	Voltage/impedance
REC OUT	Phono jack	Voltage 150 mV Impedance 1 kohm
SPEAKERS	—	Model for Scandinavian countries, Switzerland, Spain and Portugal: 8 - 16 ohms Model for other countries: 4 - 16 ohms
HEADPHONES	Stereo phone jack	Accepts low and high impedance headphones

Tone controls

	Response	Turnover frequency
BASS	± 10 dB (100 Hz)	300 Hz
TREBLE	± 10 dB (10 kHz)	5 kHz

Harmonic distortion Less than 0.025% at 10 W output
Intermodulation (IM) distortion (60 Hz: 7 kHz = 4:1)

Frequency response Less than 0.025% at 10 W output
PHONO: RIAA equalization curve
± 0.5 dB

TUNER, CD, AUX, TAPE 1/DAT,
TAPE 2/MD: 7 Hz - 100 kHz ± 3 dB

Residual noise Less than 170 µV (network A)
Damping factor 50 (8 ohms, 1 kHz)

— Continued on next page —

INTEGRATED STEREO AMPLIFIER
SONY®

General	
System	Preamplifier: Low-noise, equalizer amplifier Power amplifier: Pure-complementary SEPP OCL power amplifier with all stages directly coupled
Power requirements	220 V – 230 V AC, 50/60 Hz
Power consumption	Model for Scandinavian countries, Switzerland, Spain and Portugal 120 W Model for other countries 180 W
Dimensions	Approx. 430 × 135 × 315 mm (w/h/d) (17 × 5½ × 12½ inches)
Mass	Approx. 6.6 kg (14 lb 9 oz)
Supplied accessories	Remote commander RM-S311 (1) Sony SUM-3 (NS) batteries (2)

The above values are measured at 230 V AC.

Design and specifications are subject to change without notice.

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Note:

There are two type of AEP models which are depend on countries.

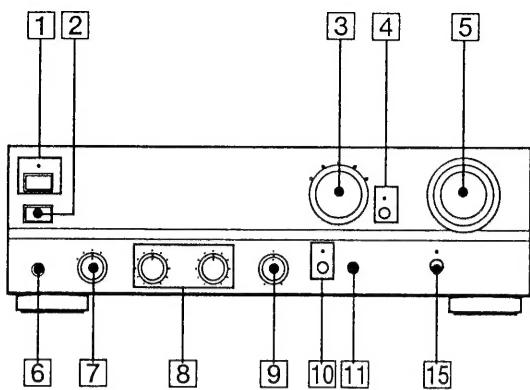
AEP2 model: Model for Scandinavian countries, Switzerland, Spain and Portugal

AEP1 model: Model for other European countries

SECTION 1 GENERAL

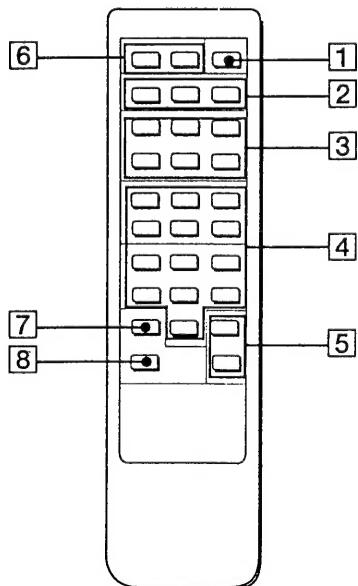
This section is extracted from instruction manual.

LOCATION OF CONTROLS



Front Panel

- 1 POWER switch and STANDBY indicator
Immediately after turning on the POWER switch, the STANDBY indicator blinks and then goes off. In case of short-circuit of the speaker outputs, etc., the indicator remains blinking. In such case, turn off the unit and check the connected components and speaker system.
- 2 Remote control sensor
- 3 INPUT SELECTOR and indicators
TAPE 2/MD
AUX
CD
TUNER
PHONO
- 4 SOURCE DIRECT button and indicator
- 5 VOLUME control
- 6 HEADPHONES jack
- 7 SPEAKERS selector
- 8 TONE (BASS/TREBLE) controls
- 9 BALANCE control
- 10 EON button and indicator
- 11 LOUDNESS button
- 15 TAPE 1/DAT MONITOR button and indicator



Remote Commander

- 1 POWER switch
- 2 TUNER operation buttons
TUNER: Select the TUNER mode.
PRESET +/- buttons: Select the preset station.
- 3 CD operation buttons
◀◀/▶▶: Automatic music sensor.
D. (Disc) SKIP: Disc skip (for CD player equipped with a multi-disc changer)
▶: The amplifier enters the CD mode and the CD player starts playback automatically.
■: Stop.
■: Pause.
- 4 TAPE 2 DECK A/DECK B operation buttons
◀◀/▶▶: Fast winding.
■: Stop.
◀: The amplifier enters the TAPE 2 mode and the tape deck starts reverse playback automatically.
▶: The amplifier enters the TAPE 2 mode and the tape deck starts forward playback automatically.
● + ▶: Start recording
● + ▲: Start recording in the reverse direction
■: Pause. (Only for DECK B)
- 5 VOL (Volume) +/- buttons
- 6 PHONO operation buttons
START: Pressing START automatically selects the PHONO mode on the amplifier and starts playback of the turntable system.
STOP: Stops playback of the turntable system.
- 7 DAT/TAPE 1 button
Selects the DAT or TAPE 1 mode.
- 8 AUX button
Selects the AUX mode.

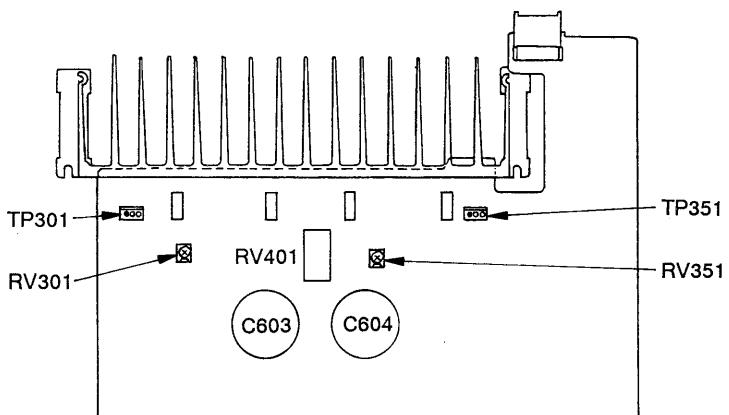
SECTION 2

ELECTRICAL ADJUSTMENT

Note:

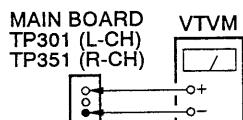
1. DC BIAS adjustments should be made within 2 to 3 minutes after the POWER switch is turned on (POWER ON).
2. After replacing the power transistors, DC BIAS adjustments should be made.

[ADJUSTMENT LOCATIONS]



DC Bias Adjustment (with no signal input)

Procedure:

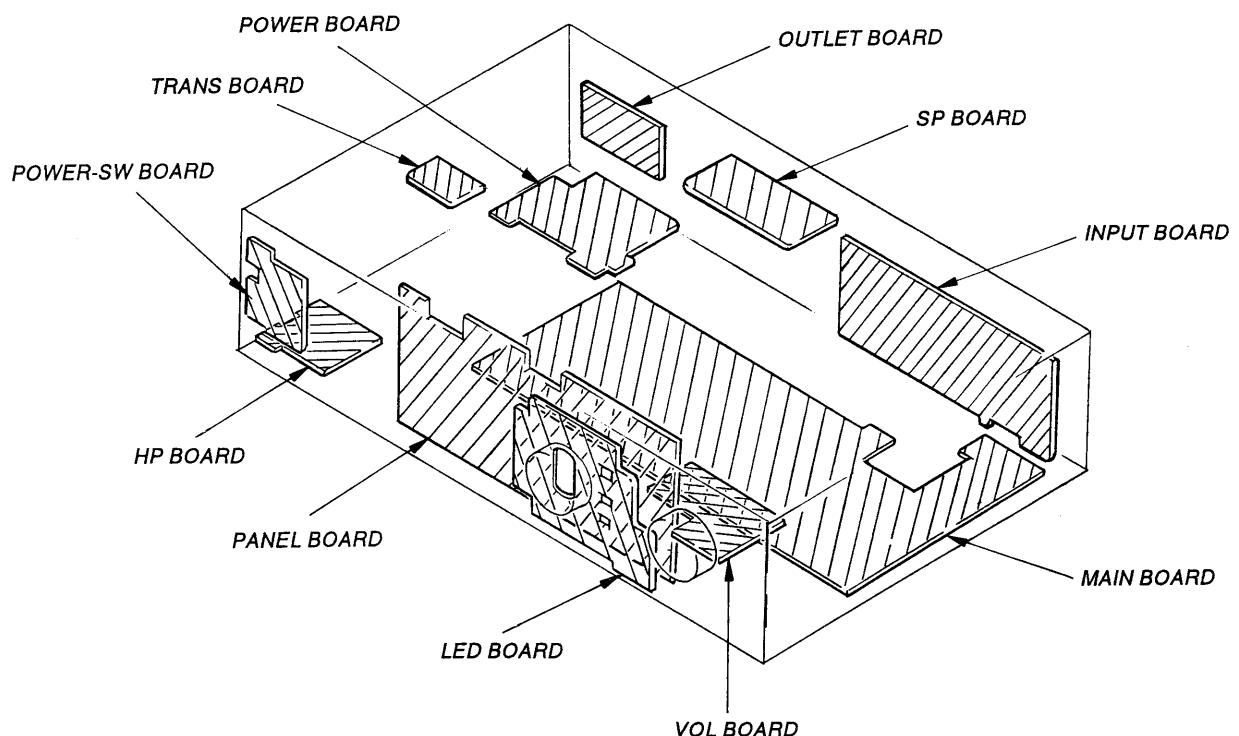


	Adjustment part	Reading on VTVM
L-CH	RV301	20 mV
R-CH	RV351	20 mV

SECTION 3

DIAGRAMS

• **Circuit Boards Location**

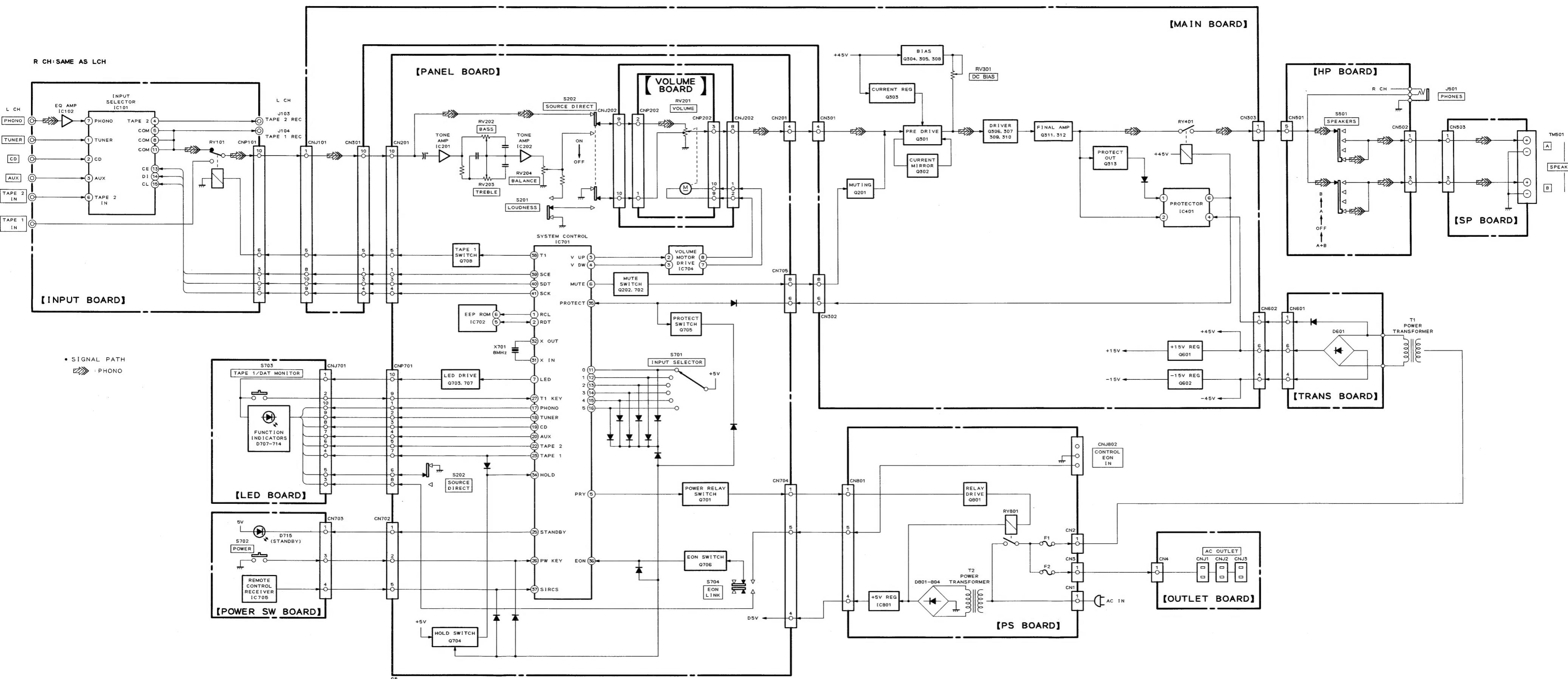


3-1. IC PIN DESCRIPTION

PANEL BOARD IC701 TMP47C200BN-H307

Pin No.	Pin Name	I/O	Description
1	RCL	O	Clock Data } Serial data of EEPROM. (X24C01)
2	RDT	I/O	
3	VUP	O	Up Down } VR motor control signal. (Active: H, Stop: L-L, Brake: H-H)
4	VDW	O	
5	PRY	O	Power relay ON/OFF control signal. (ON: L)
6	MUT	O	Mute Control signal output when switching. (Mute: H)
7	LED	O	LED display signal. (L: Function LED is turned on.)
8	SIM	I	SIRCS decode/mode switching signal. (Pull down to GND.)
9	—	I	Not used. (Pull down to GND.)
10	—	I	Not used. (Pull down to GND.)
11	SW0	I	Relativity position detection signal of rotary switch. (One of them terminal: L, the other terminal: H) Direction from SW5 to SW0, TUNER → CD → AUX → TAPE2 → PHONO → TUNER →
12	SW1	I	
13	SW2	I	
14	SW3	I	
15	SW4	I	
16	SW5	I	
17	PHONO	O	Function LED drive signal. (ON: L)
18	TUNER	O	
19	CD	O	
20	AUX	O	
21	GND	—	GND terminal.
22	TAPE2	O	Function LED drive signal. (ON: L)
23	TAPE1	O	
24	VOLLED	O	Not used. (Pull down to GND.)
25	STANBY	O	Standby LED drive signal. (ON: L)
26	PW KEY	I	Power ON/OFF signal. (SW ON: L)
27	T1 KEY	I	Not used. (Open)
28	—	I	Not used. (Pull down to GND.)
29	F3/F5	I	Model mode switch signal. (Pull up to VDD.)
30	TEST		Test terminal. (Open)
31	XIN	—	Oscillation signal 8.19 MHz.
32	XOUT	—	
33	RESET	I	Reset signal. (Reset: L)
34	HOLD	I	Cancellation of hold mode signal. (Start: H)
35	PROTEC	I	Protector detection signal. (Active: H)
36	EON	I	EON detection signal. (Switch to TUNER, when H to L.)
37	SIRCS	I	SIRCS signal. (Active: L)
38	T1	O	Not used. (Pull down to GND.)
39	SCE	O	Chip Enable Data Clock } Serial control signal to TC9173.
40	SDT	O	
41	SCK	O	
42	VDD	—	Power supply (+5 V) terminal.

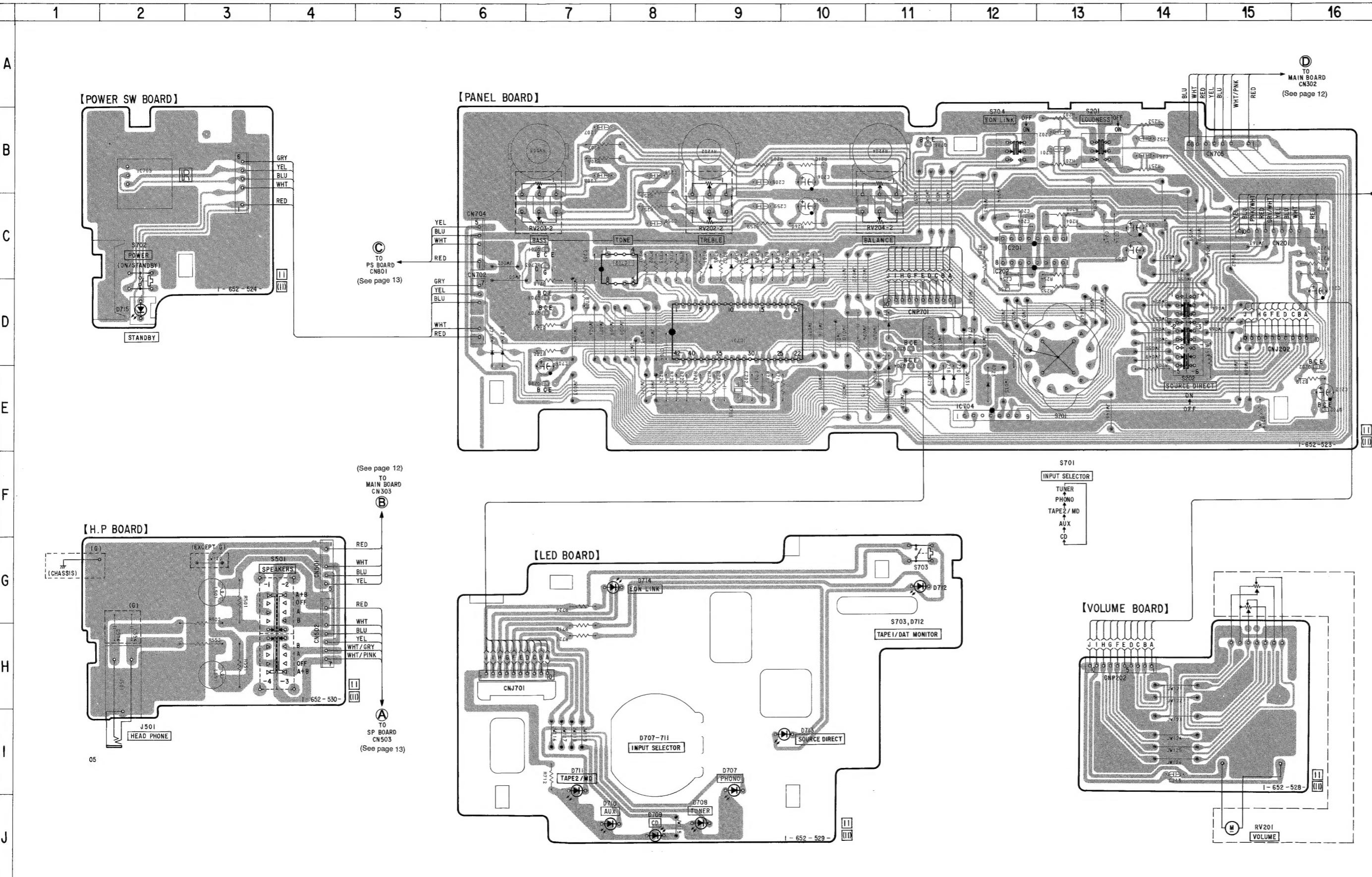
3-2. BLOCK DIAGRAM



3-3. PRINTED WIRING BOARDS - PANEL SECTION -

• Semiconductor Location

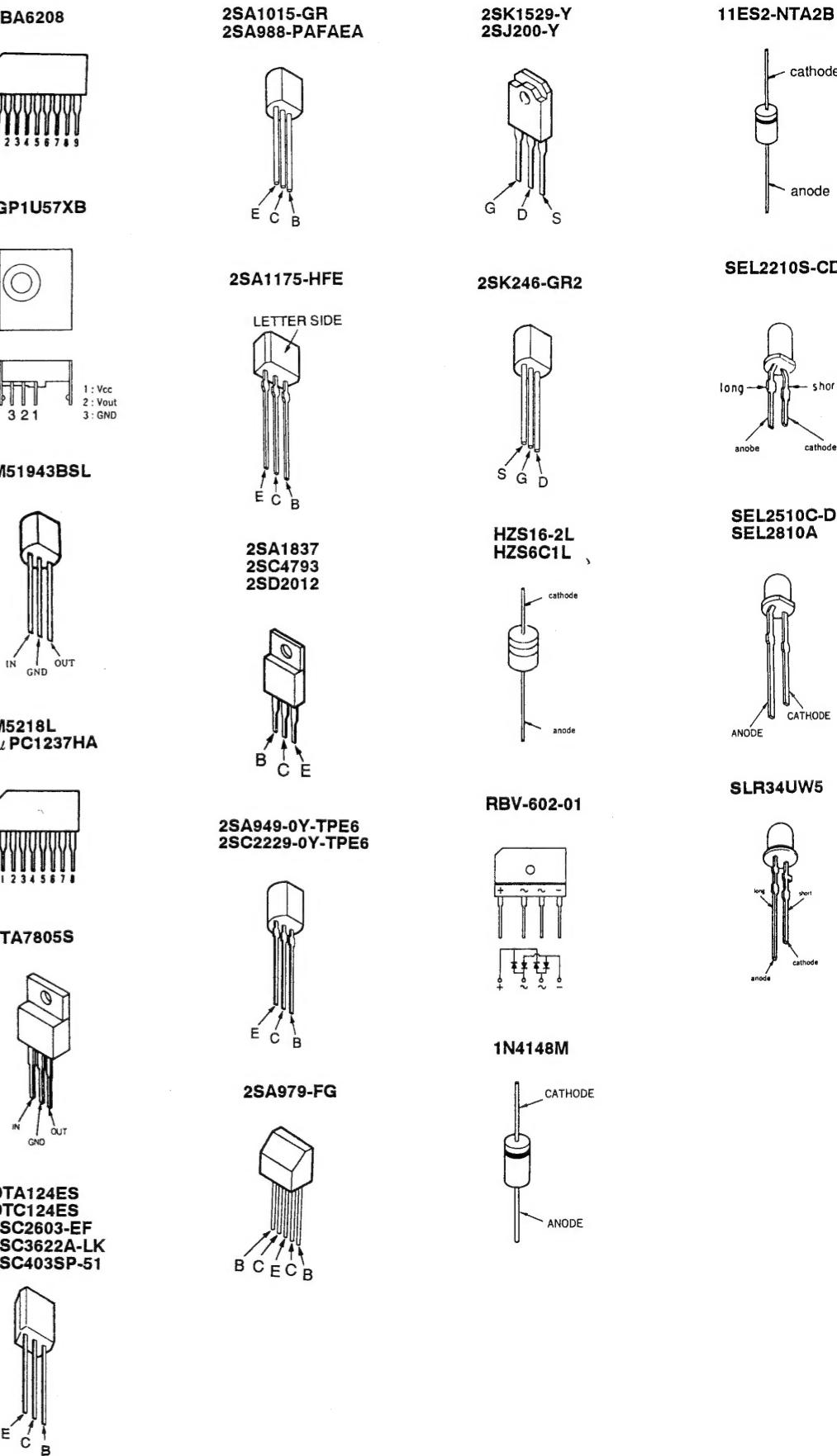
Ref. No.	Location
D701	C-9
D702	C-9
D703	C-9
D704	C-9
D705	C-10
D706	C-10
D707	I-9
D708	J-9
D709	J-8
D710	J-7
D711	I-7
D712	G-11
D713	I-10
D714	G-8
D715	D-2
D716	D-12
D717	D-6
D718	E-11
D719	E-11
D720	E-12
D721	D-6
D722	E-11
D723	E-12
IC201	C-12
IC202	C-12
IC701	D-9
IC702	C-8
IC703	C-7
IC704	E-12
IC705	B-2
Q202	E-16
Q701	C-7
Q702	E-16
Q703	D-7
Q704	D-11
Q705	D-11
Q706	B-11
Q707	D-7
Q708	E-7

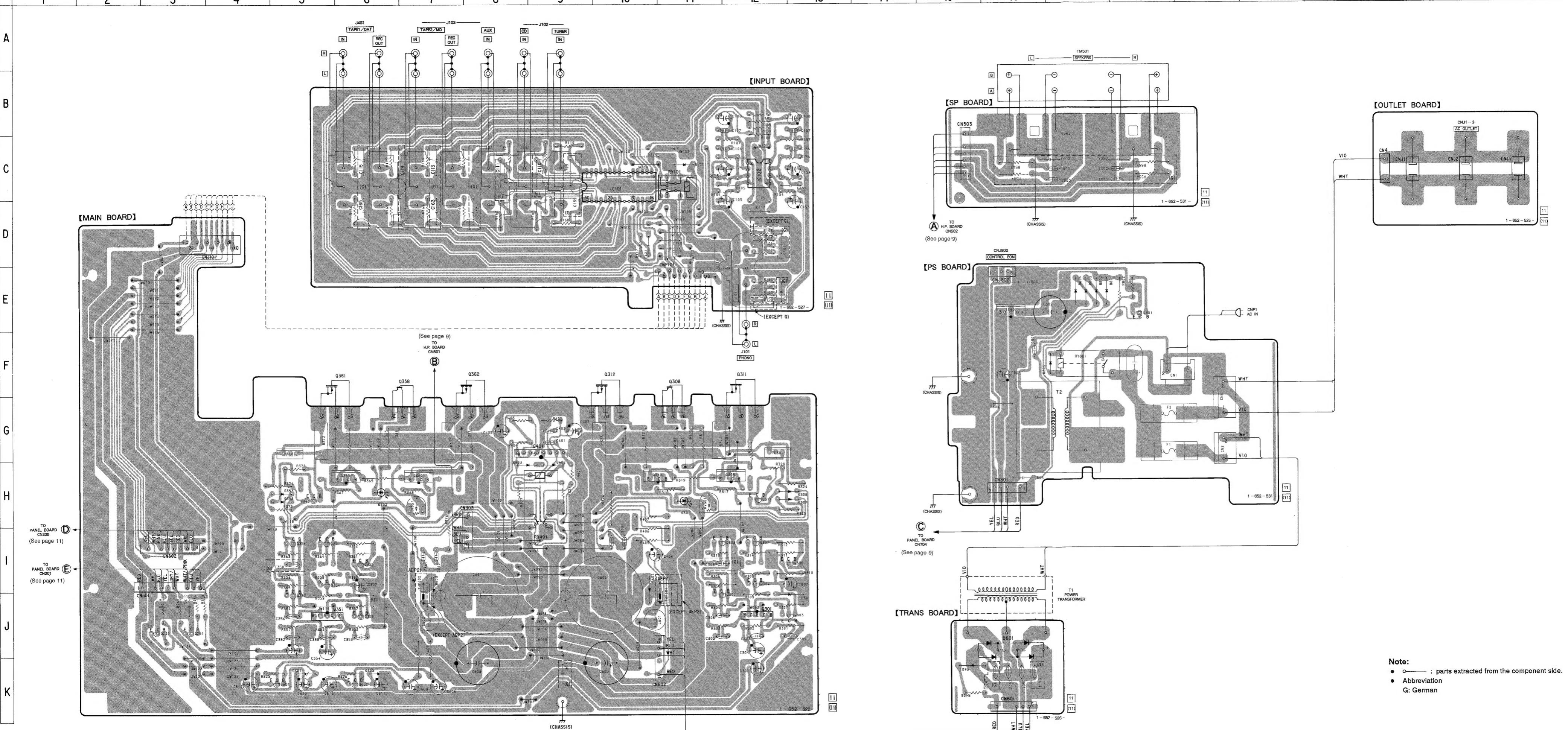


Note:

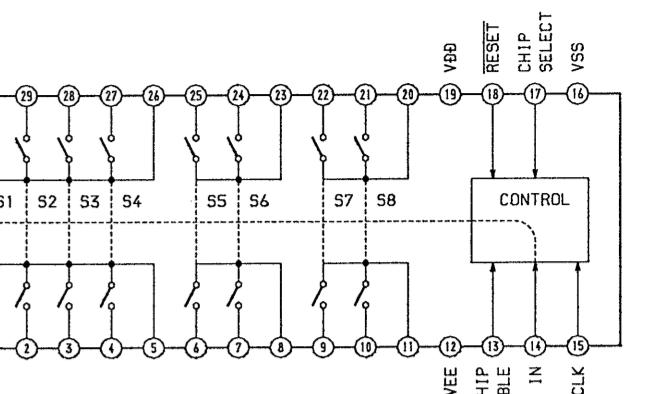
- : parts extracted from the component side.
- Abbreviation
- G: German

• Semiconductor Lead Layouts

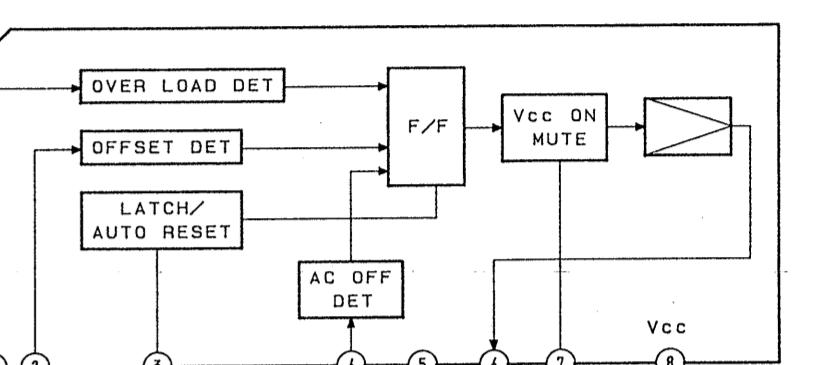




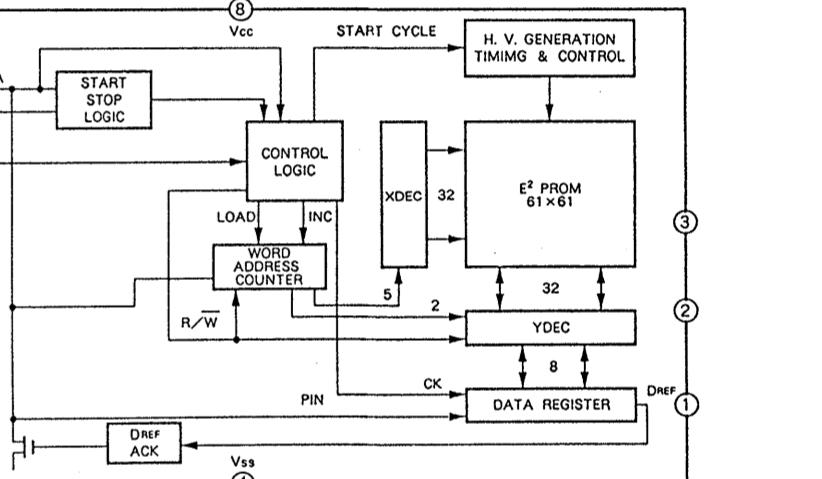
- IC Block Diagrams
- IC101 LC7821



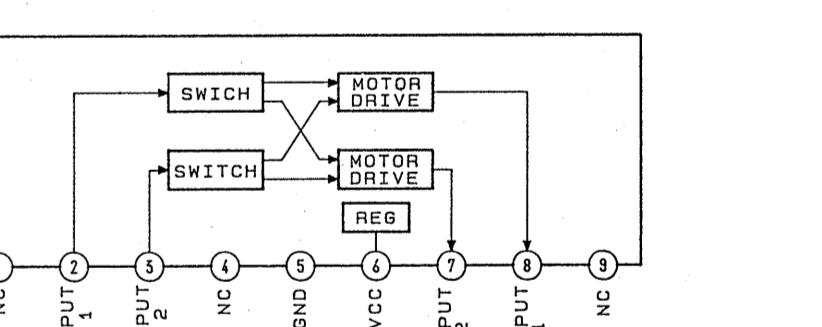
- IC401 μPC1237HA



- IC702 X24C01-P-S



- IC704 BA6208



Note:
 • All capacitors are in μ F unless otherwise noted. pF: μ pF 50 WV or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and 1/4 W or less unless otherwise specified.
 • \triangle : nonflammable resistor.
 • \square : fusible resistor.

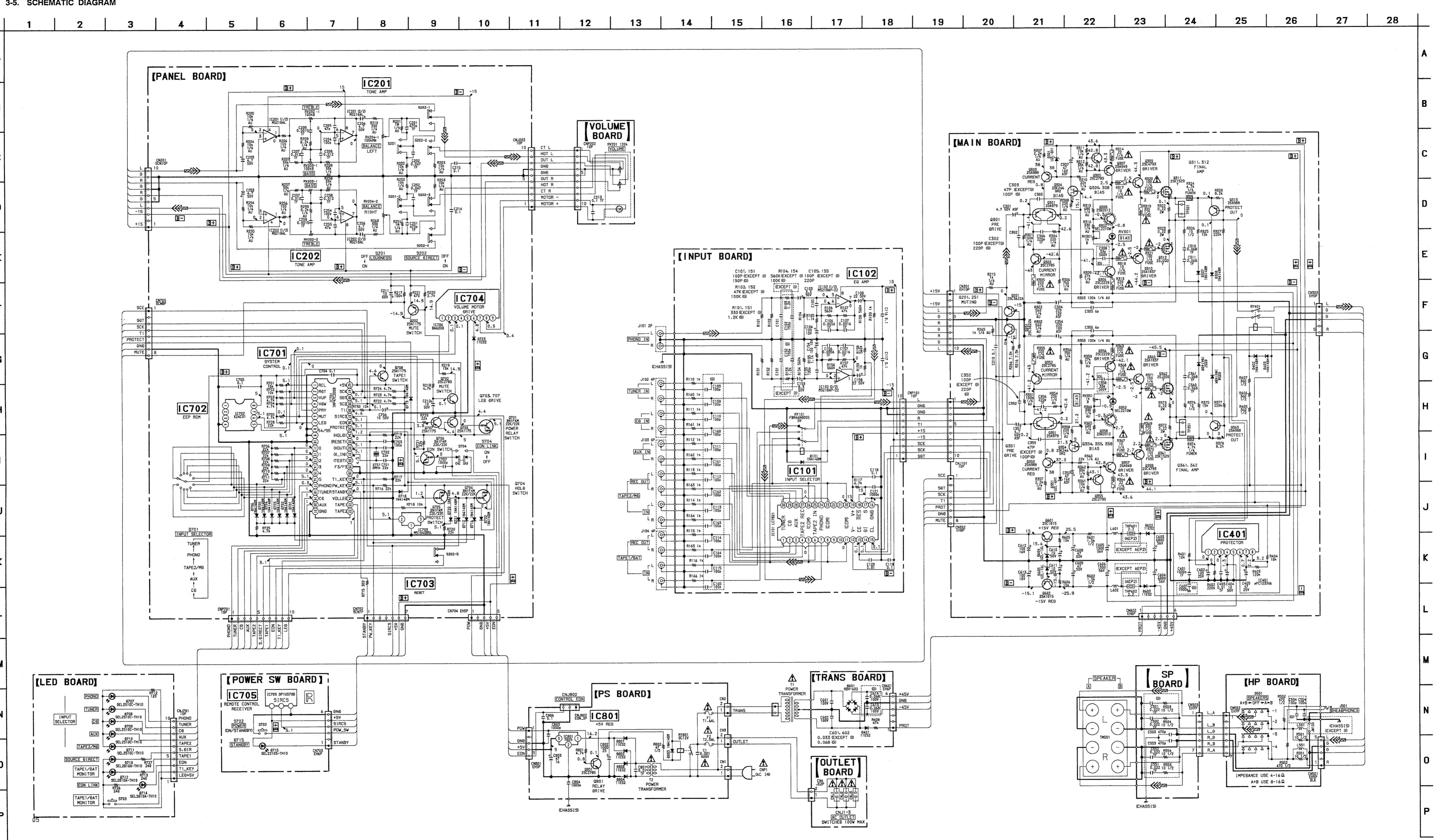
Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

- \square : B + Line.
- \square : B - Line.
- \square : panel designation.
- \square : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark: PHONO
- Voltages are taken with a VOM (10 M Ω /V). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \Rightarrow : PHONO
- Abbreviation
- German

3-5. SCHEMATIC DIAGRAM

• Semiconductor Location

Ref. No.	Location
D101	C-11
D301	J-12
D302	H-11
D307	H-12
D308	H-12
D351	J-6
D352	H-6
D357	H-5
D358	H-5
D401	K-15
D402	H-9
D403	H-9
D601	J-16
D602	I-10
D603	I-7
D604	K-5
D605	K-6
D801	E-17
D802	E-17
D803	E-17
D804	E-17
D805	F-17
IC101	C-10
IC102	C-12
IC401	G-9
IC801	E-16
Q201	J-3
Q251	J-3
Q301	J-12
Q302	J-11
Q303	J-12
Q304	I-12
Q305	I-12
Q306	I-11
Q307	I-12
Q308	F-11
Q309	H-12
Q310	H-10
Q311	F-10
Q312	F-10
Q313	H-12
Q351	J-5
Q352	J-5
Q353	J-6
Q354	I-5
Q355	I-6
Q356	I-5
Q357	I-5
Q358	F-7
Q359	H-6
Q360	H-7
Q361	F-6
Q362	F-8
Q363	K-5
Q601	K-6
Q801	E-18



SECTION 4

EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) ... (RED)

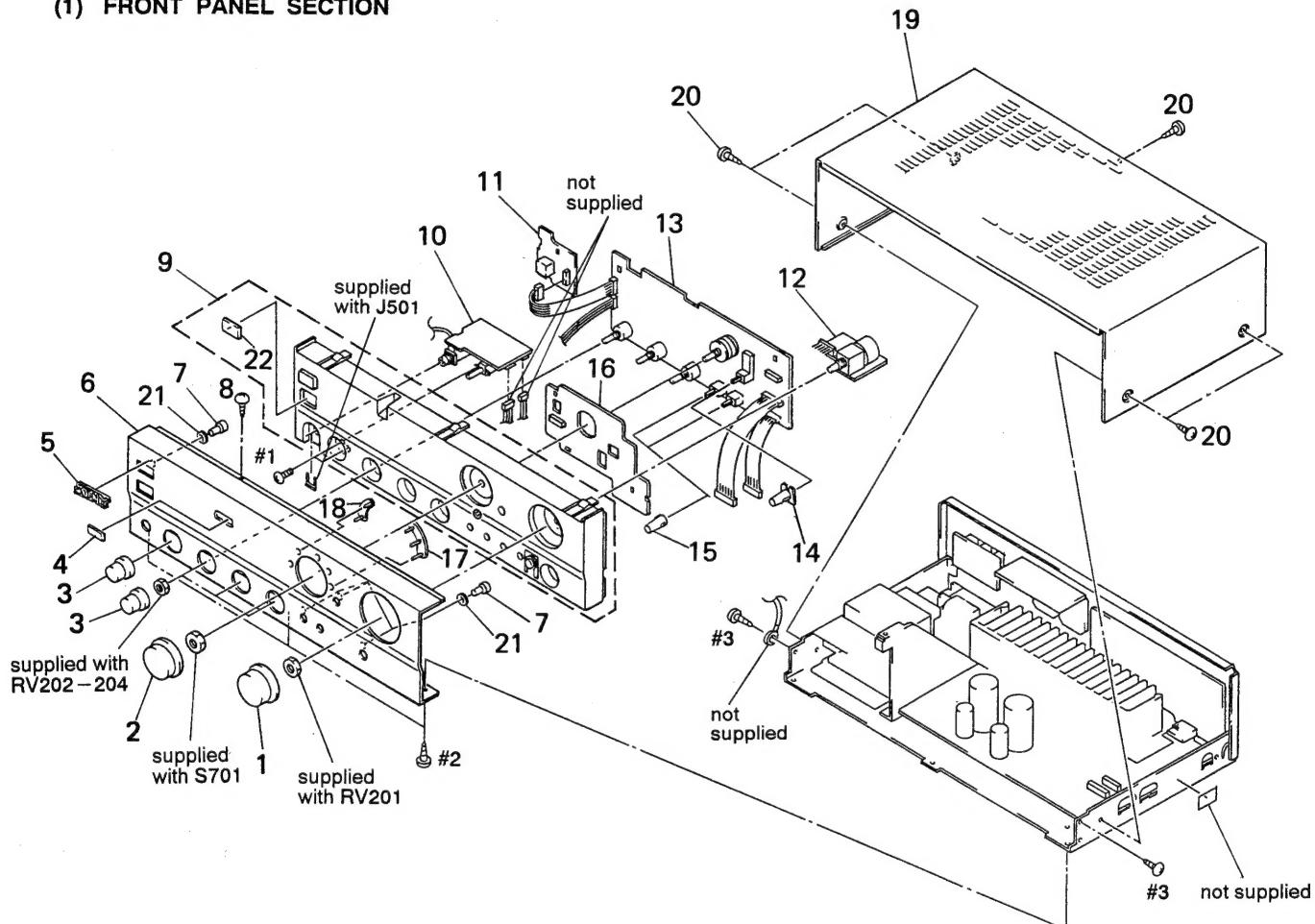
Parts Color Cabinet's Color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

- Abbreviation
G: German

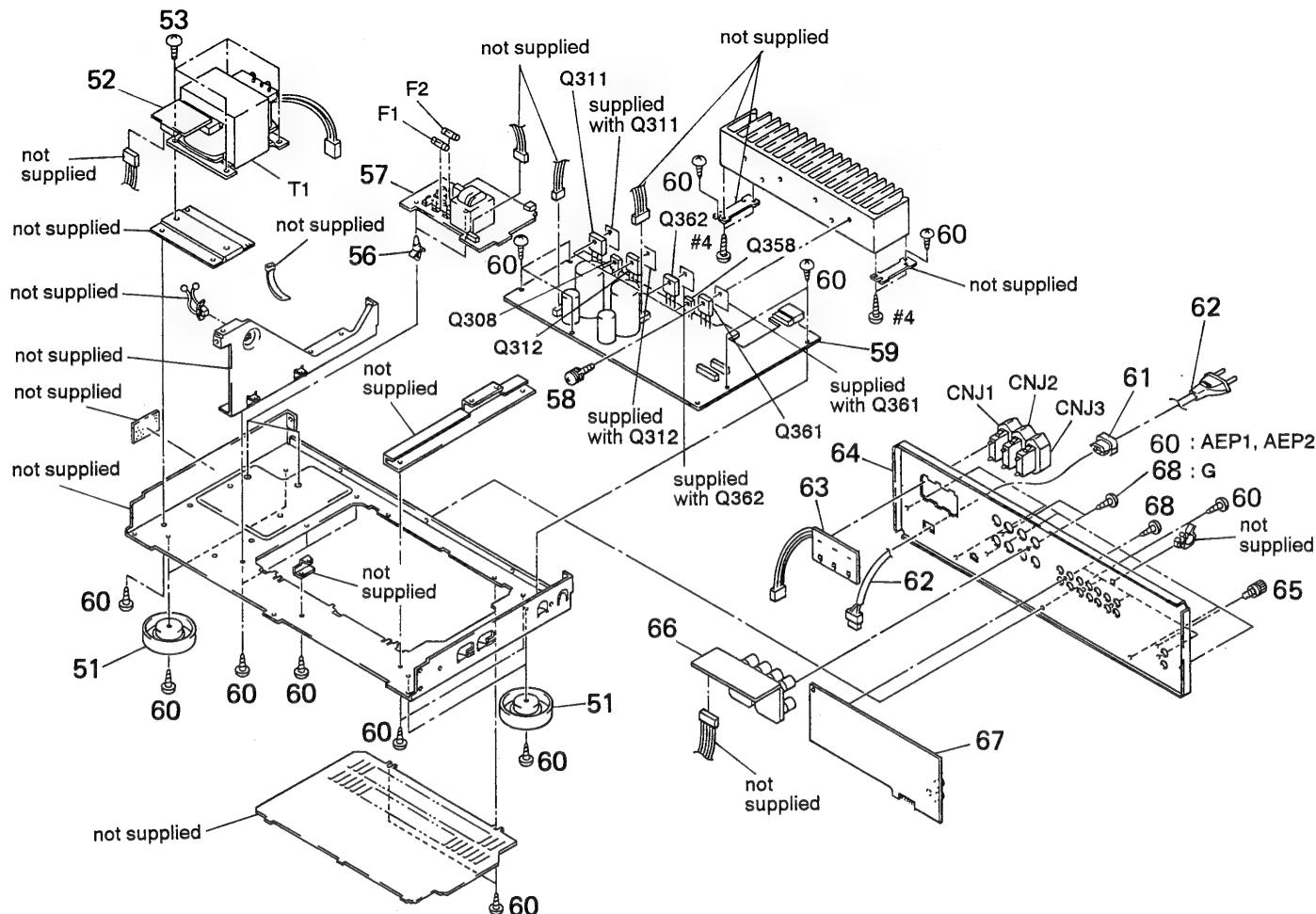
(1) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	X-4944-844-1	KNOB (VOL) ASSY	
2	4-966-003-01	KNOB (SEL)	
3	4-965-996-01	KNOB (TONE)	
4	4-965-651-01	EMBLEM (MOS)	
5	4-942-568-01	EMBLEM (NO. 5), SONY	
6	4-965-991-01	PANEL, FRONT	
7	4-938-518-01	INDICATOR (C)	
8	4-967-961-01	SCREW (3X8) (SPECIAL)	
9	X-4944-846-1	BASE ASSY, PANEL	
* 10	1-652-530-11	HP BOARD	
* 11	1-652-524-11	POWER-SW BOARD	

Ref. No.	Part No.	Description	Remark
* 12	1-652-528-11	VOLUME BOARD	
* 13	A-4371-023-A	PANEL BOARD, COMPLETE	
14	4-966-000-01	BUTTON (L)	
15	4-965-997-01	BUTTON (S)	
* 16	1-652-529-11	LED BOARD	
17	4-965-999-01	INDICATOR (3)	
18	4-965-999-11	INDICATOR (3)	
19	4-929-294-11	CASE	
20	3-704-366-01	SCREW (CASE) (M3X8)	
* 21	4-927-881-01	HEET, ADHESIVE	
22	4-931-911-01	FILTER	

(2) CHASSIS SECTION



Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
51	4-956-885-11	FOOT (F58175S2W)	
* 52	1-652-526-11	TRANS BOARD	
53	4-967-960-01	SCREW (4X8)	
* 56	3-346-265-11	HOLDER, PC BOARD	
* 57	1-652-532-11	PS BOARD	
58	3-905-609-11	SCREW (TRANSISTOR)	
* 59	A-4371-020-A	MAIN BOARD, COMPLETE (AEP1)	
* 59	A-4371-021-A	MAIN BOARD, COMPLETE (AEP2)	
* 59	A-4371-022-A	MAIN BOARD, COMPLETE (German)	
60	4-967-961-01	SCREW (3X8) (SPECIAL)	
* 61	3-703-244-00	BUSHING (2104), CORD	
Δ 62	1-575-651-21	CORD, POWER	
* 63	1-652-525-11	OUTLET BOARD	
* 64	4-966-005-01	PANEL, BACK (AEP1)	
* 64	4-966-005-11	PANEL, BACK (AEP2)	
* 64	4-966-005-21	PANEL, BACK (German)	
65	4-947-010-01	SCREW, FEEDER FIXED	

Ref. No.	Part No.	Description	Remark
* 66	1-652-531-11	SP BOARD	
* 67	A-4371-027-A	INPUT BOARD, COMPLETE (AEP1, AEP2)	
* 67	A-4371-028-A	INPUT BOARD, COMPLETE (German)	
68	3-704-515-41	SCREW (BV/RING)	
Δ CNJ1	1-526-794-11	OUTLET, AC	
Δ CNJ2	1-526-794-11	OUTLET, AC	
Δ CNJ3	1-526-794-11	OUTLET, AC	
Δ F1	1-532-286-00	FUSE (T1. 6A)	
Δ F2	1-532-259-00	FUSE (T2. 5A)	
Q308	8-729-209-15	TRANSISTOR	2SD2012
Q311	8-729-232-45	TRANSISTOR	2SK1529-Y
Q312	8-729-232-46	TRANSISTOR	2SJ200-Y
Q358	8-729-209-15	TRANSISTOR	2SD2012
Q361	8-729-232-45	TRANSISTOR	2SK1529-Y
Q362	8-729-232-46	TRANSISTOR	2SJ200-Y
Δ T1	1-426-797-11	TRANSFORMER, POWER	

SECTION 5

ELECTRICAL PARTS LIST

HP

INPUT

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● SEMICONDUCTORS

In each case, $u:\mu$, for example:

$uA:\mu A$, $uPA:\mu PA$,

$uPB:\mu PB$,

$uPC:\mu PC$, $uPD:\mu PD$.

● CAPACITORS

$uF:\mu F$

● COILS

$uH:\mu H$

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
*	1-652-530-11	HP BOARD	*****			C104	1-124-443-00	ELECT	100uF	20%	10V
C504	1-162-282-31	CERAMIC	100PF	10%	50V (German)	C105	1-162-282-31	CERAMIC	100PF	10%	50V (AEP1, AEP2)
C554	1-162-282-31	CERAMIC	100PF	10%	50V (German)	C105	1-162-286-31	CERAMIC	220PF	10%	50V (German)
CN501	1-691-766-21	PLUG (MICRO CONNECTOR) 4P				C106	1-130-480-00	MYLAR	0.0056uF	5%	50V
CN502	1-691-768-11	PLUG (MICRO CONNECTOR) 6P				C107	1-104-842-91	MYLAR	0.0016uF	5%	50V
J501	1-750-162-61	JACK (LARGE TYPE) (HEADPHONES)	< CONNECTOR >			C108	1-124-916-11	ELECT	22uF	20%	63V
			< JACK >			C109	1-162-282-31	CERAMIC	100PF	10%	50V (German)
			< COIL >			C110	1-162-282-31	CERAMIC	100PF	10%	50V (German)
* L501	1-420-872-00	COIL, AIR-CORE				C111	1-162-282-31	CERAMIC	100PF	10%	50V (German)
* L551	1-420-872-00	COIL, AIR-CORE				C112	1-162-282-31	CERAMIC	100PF	10%	50V (German)
			< RESISTOR >			C113	1-162-282-31	CERAMIC	100PF	10%	50V (German)
R501	1-247-727-11	CARBON	10	5%	1/2W	C114	1-162-282-31	CERAMIC	100PF	10%	50V (German)
R502	1-247-747-11	CARBON	470	5%	1/2W	C115	1-162-282-31	CERAMIC	100PF	10%	50V (German)
R551	1-247-727-11	CARBON	10	5%	1/2W	C116	1-164-159-11	CERAMIC	0.1uF		50V
R552	1-247-747-11	CARBON	470	5%	1/2W	C117	1-164-159-11	CERAMIC	0.1uF		50V
			< SWITCH >			C118	1-164-159-11	CERAMIC	0.1uF		50V
S501	1-692-147-11	SWITCH, ROTARY SLIDE (SPEAKERS)				C119	1-164-159-11	CERAMIC	0.1uF		50V
			*****			C120	1-161-379-00	CERAMIC	0.01uF	20%	25V
*	A-4371-027-A	INPUT BOARD, COMPLETE (AEP1, AEP2)				C121	1-162-294-31	CERAMIC	0.001uF	10%	50V
*	A-4371-028-A	INPUT BOARD, COMPLETE (German)				C151	1-162-282-31	CERAMIC	100PF	10%	50V (AEP1, AEP2)
			*****			C151	1-162-284-31	CERAMIC	150PF	10%	50V (German)
			< CAPACITOR >			C152	1-162-284-31	CERAMIC	150PF	10%	50V (German)
C101	1-162-282-31	CERAMIC	100PF	10%	50V (AEP1, AEP2)	C153	1-126-962-11	ELECT	3.3uF	20%	50V
C101	1-162-284-31	CERAMIC	150PF	10%	50V (German)	C154	1-124-443-00	ELECT	100uF	20%	10V
C102	1-162-284-31	CERAMIC	150PF	10%	50V (German)	C155	1-162-282-31	CERAMIC	100PF	10%	50V (AEP1, AEP2)
C103	1-126-962-11	ELECT	3.3uF	20%	50V	C155	1-162-286-31	CERAMIC	220PF	10%	50V (German)
			*****			C156	1-130-480-00	MYLAR	0.0056uF	5%	50V
			< CAPACITOR >			C157	1-104-842-91	MYLAR	0.0016uF	5%	50V
			*****			C158	1-124-916-11	ELECT	22uF	20%	63V
			< CAPACITOR >			C159	1-162-282-31	CERAMIC	100PF	10%	50V (German)
C162	1-162-282-31	CERAMIC	100PF	10%	50V (German)	C160	1-162-282-31	CERAMIC	100PF	10%	50V (German)
C163	1-162-282-31	CERAMIC	100PF	10%	50V (German)	C161	1-162-282-31	CERAMIC	100PF	10%	50V (German)
C164	1-162-282-31	CERAMIC	100PF	10%	50V (German)	C165	1-162-282-31	CERAMIC	100PF	10%	50V (German)

INPUT**LED**

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
* CNP101 1-568-322-21 PLUG, CONNECTOR 10P			
< DIODE >			
D101	8-719-987-63	DIODE 1N4148M	
< IC >			
IC101	8-759-805-13	IC LC7821	
IC102	8-759-636-74	IC M5218AP-22	
< JACK >			
J101	1-573-141-21	JACK 2P (PHONO IN)	
* J102	1-573-142-21	JACK, PIN 4P (TUNER IN/CD IN)	
J103	1-568-978-11	JACK 6P (AUX IN/TAPE2/MD(REC OUT/IN))	
* J104	1-573-142-21	JACK, PIN 4P (TAPE1/DAT(REC OUT/IN))	
< RESISTOR >			
R101	1-249-411-11	CARBON 330 5% 1/4W (AEP1, AEP2)	
R101	1-249-418-11	CARBON 1.2K 5% 1/4W F (German)	
R102	1-249-437-11	CARBON 47K 5% 1/4W (AEP1, AEP2)	
R102	1-249-441-11	CARBON 100K 5% 1/4W (German)	
R103	1-249-418-11	CARBON 1.2K 5% 1/4W F (German)	
R104	1-247-897-11	CARBON 560K 5% 1/4W (AEP1, AEP2)	
R104	1-249-441-11	CARBON 100K 5% 1/4W (German)	
R105	1-247-832-11	CARBON 1.1K 5% 1/4W	
R106	1-247-897-11	CARBON 560K 5% 1/4W	
R107	1-249-437-11	CARBON 47K 5% 1/4W	
R108	1-247-897-11	CARBON 560K 5% 1/4W	
R109	1-249-417-11	CARBON 1K 5% 1/4W F	
R110	1-247-713-11	CARBON 1K 5% 1/4W F	
R111	1-247-713-11	CARBON 1K 5% 1/4W F	
R112	1-247-713-11	CARBON 1K 5% 1/4W F	
R113	1-247-713-11	CARBON 1K 5% 1/4W F	
R114	1-247-713-11	CARBON 1K 5% 1/4W F	
R115	1-247-713-11	CARBON 1K 5% 1/4W F	
R116	1-247-713-11	CARBON 1K 5% 1/4W F	
R117	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R151	1-249-411-11	CARBON 330 5% 1/4W (AEP1, AEP2)	
R151	1-249-418-11	CARBON 1.2K 5% 1/4W F (German)	
R152	1-249-437-11	CARBON 47K 5% 1/4W (AEP1, AEP2)	
R152	1-249-441-11	CARBON 100K 5% 1/4W (German)	
R153	1-249-418-11	CARBON 1.2K 5% 1/4W F (German)	
R154	1-247-897-11	CARBON 560K 5% 1/4W (AEP1, AEP2)	
R154	1-249-441-11	CARBON 100K 5% 1/4W (German)	
R155	1-247-832-11	CARBON 1.1K 5% 1/4W	
R156	1-247-897-11	CARBON 560K 5% 1/4W	
R157	1-249-437-11	CARBON 47K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R158	1-247-897-11	CARBON 560K 5% 1/4W	
R159	1-249-417-11	CARBON 1K 5% 1/4W F	
R160	1-247-713-11	CARBON 1K 5% 1/4W F	
R161	1-247-713-11	CARBON 1K 5% 1/4W F	
R162	1-247-713-11	CARBON 1K 5% 1/4W F	

R163	1-247-713-11	CARBON 1K 5% 1/4W F	
R164	1-247-713-11	CARBON 1K 5% 1/4W F	
R165	1-247-713-11	CARBON 1K 5% 1/4W F	
R166	1-247-713-11	CARBON 1K 5% 1/4W F	

< RELAY >

RY101 1-515-622-11 RELAY

* 1-652-529-11 LED BOARD

< CONNECTOR >

* CNJ701 1-691-244-11 SOCKET, CONNECTOR 10P

< DIODE >

D707	8-719-303-02	LED SEL2510C-D (PHONO)
D708	8-719-303-02	LED SEL2510C-D (TUNER)
D709	8-719-303-02	LED SEL2510C-D (CD)
D710	8-719-303-02	LED SEL2510C-D (AUX)
D711	8-719-303-02	LED SEL2510C-D (TAPE2/MD)
D712	8-719-301-49	LED SEL2810A (TAPE1/DAT MONITOR)
D713	8-719-301-49	LED SEL2810A (SOURCE DIRECT)
D714	8-719-301-49	LED SEL2810A (EON LINK)

< RESISTOR >

R712	1-249-406-11	CARBON 120 5% 1/4W F
R713	1-247-816-11	CARBON 240 5% 1/4W
R726	1-247-816-11	CARBON 240 5% 1/4W
R727	1-247-816-11	CARBON 240 5% 1/4W

< SWITCH >

S703 1-554-303-21 SWITCH, TACTILE (TAPE1/DAT MONITOR)

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
*	A-4371-020-A	MAIN BOARD, COMPLETE (AEP1)				C603	1-109-866-11	ELECT (SOLID)	6800uF	20%	56V
		*****				C604	1-109-866-11	ELECT (SOLID)	6800uF	20%	56V
*	A-4371-021-A	MAIN BOARD, COMPLETE (AEP2)				C605	1-109-967-11	ELECT (SOLID)	1000uF	20%	56V
		*****				C606	1-109-967-11	ELECT (SOLID)	1000uF	20%	56V
*	A-4371-022-A	MAIN BOARD, COMPLETE (German)				C607	1-162-294-31	CERAMIC	0.001uF	10%	50V
		*****				C608	1-124-910-11	ELECT	47uF	20%	50V
		< CAPACITOR >				C609	1-124-910-11	ELECT	47uF	20%	50V
C210	1-164-159-11	CERAMIC	0.1uF		50V	C610	1-124-907-11	ELECT	10uF	20%	50V
C301	1-126-163-11	ELECT	4.7uF	20%	50V	C611	1-124-907-11	ELECT	10uF	20%	50V
C302	1-110-335-11	MYLAR	100PF	5%	50V	C612	1-126-101-11	ELECT	100uF	20%	16V
					(AEP1, AEP2)	C613	1-126-101-11	ELECT	100uF	20%	16V
C302	1-110-339-11	MYLAR	220PF	5%	50V						< CONNECTOR >
					(German)	CN301	1-691-771-11	PLUG (MICRO CONNECTOR)	9P		
C303	1-164-062-11	CERAMIC	47PF	5%	50V	CN302	1-691-769-11	PLUG (MICRO CONNECTOR)	7P		
					(AEP1, AEP2)	CN303	1-691-766-21	PLUG (MICRO CONNECTOR)	4P		
C303	1-164-070-11	CERAMIC	100PF	5%	50V	CN602	1-691-767-11	PLUG (MICRO CONNECTOR)	5P		
					(German)	CNJ101	1-568-321-11	SOCKET, CONNECTOR	10P		
C304	1-124-995-11	ELECT	220uF	20%	10V						< DIODE >
C305	1-102-943-00	CERAMIC	6.0PF	+-0.5PF	50V	D301	8-719-933-39	DIODE	HZS6C1L		
C306	1-110-339-11	MYLAR	220PF	5%	50V	D302	8-719-900-19	LED	SLR34UW5		
C307	1-126-022-11	ELECT	47uF	20%	16V	D307	8-719-987-63	DIODE	1N4148M		
C308	1-102-233-00	CERAMIC	33PF	10%	500V	D308	8-719-987-63	DIODE	1N4148M		
					(German)	D351	8-719-933-39	DIODE	HZS6C1L		
C310	1-136-163-00	FILM	0.068uF	5%	50V	D352	8-719-900-19	LED	SLR34UW5		
C311	1-136-163-00	FILM	0.068uF	5%	50V	D357	8-719-987-63	DIODE	1N4148M		
C351	1-126-163-11	ELECT	4.7uF	20%	50V	D358	8-719-987-63	DIODE	1N4148M		
C352	1-110-335-11	MYLAR	100PF	5%	50V	D402	8-719-987-63	DIODE	1N4148M		
					(AEP1, AEP2)	D403	8-719-987-63	DIODE	1N4148M		
C352	1-110-339-11	MYLAR	220PF	5%	50V	D602	8-719-024-99	DIODE	11ES2-NTA2B		
C353	1-164-062-11	CERAMIC	47PF	5%	50V	D603	8-719-024-99	DIODE	11ES2-NTA2B		
					(AEP1, AEP2)	D604	8-719-933-88	DIODE	HZS16-2L		
C353	1-164-070-11	CERAMIC	100PF	5%	50V	D605	8-719-933-88	DIODE	HZS16-2L		
					(German)						< IC >
C354	1-124-995-11	ELECT	220uF	20%	10V	IC401	8-759-111-68	IC	uPC1237HA		
C355	1-102-943-00	CERAMIC	6.0PF	+-0.5PF	50V						< COIL >
C356	1-110-339-11	MYLAR	220PF	5%	50V	* L601	1-428-203-11	COIL, AIR-CORE			
C357	1-126-022-11	ELECT	47uF	20%	16V	* L602	1-428-203-11	COIL, AIR-CORE			
C358	1-102-233-00	CERAMIC	33PF	10%	500V						< TRANSISTOR >
					(German)	Q201	8-729-141-26	TRANSISTOR	2SC3622A-LK		
C360	1-136-163-00	FILM	0.068uF	5%	50V	Q251	8-729-141-26	TRANSISTOR	2SC3622A-LK		
C361	1-136-163-00	FILM	0.068uF	5%	50V	Q301	8-729-620-18	TRANSISTOR	2SA979-FG		
C401	1-130-471-00	MYLAR	0.001uF	5%	50V	Q302	8-729-620-05	TRANSISTOR	2SC2603-EF		
C402	1-124-478-11	ELECT	100uF	20%	25V	Q303	8-729-140-82	TRANSISTOR	2SA988-PAFAEA		
C403	1-136-153-00	FILM	0.01uF	5%	50V						
C404	1-124-907-11	ELECT	10uF	20%	50V						
C405	1-124-477-11	ELECT	47uF	20%	25V						

MAIN

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark
Q304	8-729-201-56	TRANSISTOR	2SK246-GR2		△R319	1-212-994-00	FUSIBLE	330	5% 1/2W F
Q305	8-729-620-05	TRANSISTOR	2SC2603-EF		△R320	1-212-881-11	FUSIBLE	100	5% 1/4W F
Q306	8-729-021-73	TRANSISTOR	2SC2229-OY-TPE6		△R321	1-212-881-11	FUSIBLE	100	5% 1/4W F
Q307	8-729-021-74	TRANSISTOR	2SA949-OY-TPE6		R322	1-217-151-00	RES, METAL PLATE		0.22
Q308	8-729-209-15	TRANSISTOR	2SD2012		R323	1-217-151-00	RES, METAL PLATE		0.22
Q309	8-729-017-06	TRANSISTOR	2SC4793		R324	1-247-721-11	CARBON	4.7K	5% 1/4W F
Q310	8-729-017-05	TRANSISTOR	2SA1837		R325	1-249-431-11	CARBON	15K	5% 1/4W
Q311	8-729-232-45	TRANSISTOR	2SK1529-Y		R326	1-247-727-11	CARBON	10	5% 1/2W
Q312	8-729-232-46	TRANSISTOR	2SJ200-Y		R327	1-247-887-00	CARBON	220K	5% 1/4W
Q313	8-729-140-82	TRANSISTOR	2SA988-PAFAEA		R328	1-249-428-11	CARBON	8.2K	5% 1/4W F
Q351	8-729-620-18	TRANSISTOR	2SA979-FG		R351	1-249-469-11	CARBON	100K	5% 1/4W
Q352	8-729-620-05	TRANSISTOR	2SC2603-EF		R352	1-247-710-11	CARBON	560	5% 1/4W F
Q353	8-729-140-82	TRANSISTOR	2SA988-PAFAEA		R353	1-249-469-11	CARBON	100K	5% 1/4W
Q354	8-729-201-56	TRANSISTOR	2SK246-GR2		R354	1-247-704-11	CARBON	220	5% 1/4W F
Q355	8-729-620-05	TRANSISTOR	2SC2603-EF		△R355	1-212-889-00	FUSIBLE	220	5% 1/4W F
Q356	8-729-021-73	TRANSISTOR	2SC2229-OY-TPE6		R356	1-247-128-00	CARBON	750	5% 1/4W
Q357	8-729-021-74	TRANSISTOR	2SA949-OY-TPE6		R357	1-247-717-11	CARBON	2.2K	5% 1/4W F
Q358	8-729-209-15	TRANSISTOR	2SD2012		R358	1-247-704-11	CARBON	220	5% 1/4W F
Q359	8-729-017-06	TRANSISTOR	2SC4793		R359	1-249-586-11	CARBON	27K	5% 1/4W
Q360	8-729-017-05	TRANSISTOR	2SA1837		R360	1-249-462-11	CARBON	22K	5% 1/4W
Q361	8-729-232-45	TRANSISTOR	2SK1529-Y		R361	1-247-725-11	CARBON	10K	5% 1/4W F
Q362	8-729-232-46	TRANSISTOR	2SJ200-Y		R362	1-249-497-11	CARBON	33K	5% 1/4W
Q363	8-729-140-82	TRANSISTOR	2SA988-PAFAEA		△R363	1-212-889-00	FUSIBLE	220	5% 1/4W F
Q601	8-729-119-78	TRANSISTOR	2SC2785-HFE		△R364	1-212-865-00	FUSIBLE	22	5% 1/4W F
Q602	8-729-201-53	TRANSISTOR	2SA1015-GR		R365	1-247-711-11	CARBON	680	5% 1/4W F
< RESISTOR >					R366	1-247-706-11	CARBON	330	5% 1/4W F
R215	1-247-713-11	CARBON	1K 5%	1/4W F	△R367	1-212-857-00	FUSIBLE	10	5% 1/4W F
R216	1-247-852-11	CARBON	7.5K 5%	1/4W	△R368	1-212-857-00	FUSIBLE	10	5% 1/4W F
R265	1-247-713-11	CARBON	1K 5%	1/4W F	△R369	1-212-994-00	FUSIBLE	330	5% 1/2W F
R266	1-247-852-11	CARBON	7.5K 5%	1/4W	△R370	1-212-881-11	FUSIBLE	100	5% 1/4W F
R301	1-249-469-11	CARBON	100K 5%	1/4W	△R371	1-212-881-11	FUSIBLE	100	5% 1/4W F
R302	1-247-710-11	CARBON	560 5%	1/4W F	R372	1-217-151-00	RES, METAL PLATE		0.22
R303	1-249-469-11	CARBON	100K 5%	1/4W	R373	1-217-151-00	RES, METAL PLATE		0.22
R304	1-247-704-11	CARBON	220 5%	1/4W F	R374	1-247-721-11	CARBON	4.7K	5% 1/4W F
△R305	1-212-889-00	FUSIBLE	220 5%	1/4W F	R375	1-249-431-11	CARBON	15K	5% 1/4W
R306	1-247-128-00	CARBON	750 5%	1/4W	R376	1-247-727-11	CARBON	10	5% 1/2W
R307	1-247-717-11	CARBON	2.2K 5%	1/4W F	R377	1-247-887-00	CARBON	220K	5% 1/4W
R308	1-247-704-11	CARBON	220 5%	1/4W F	R378	1-249-428-11	CARBON	8.2K	5% 1/4W F
R309	1-249-586-11	CARBON	27K 5%	1/4W	R401	1-249-429-11	CARBON	10K	5% 1/4W
R310	1-249-462-11	CARBON	22K 5%	1/4W	R402	1-247-887-00	CARBON	220K	5% 1/4W
R311	1-247-725-11	CARBON	10K 5%	1/4W F	R403	1-247-881-00	CARBON	120K	5% 1/4W
R312	1-249-497-11	CARBON	33K 5%	1/4W	R404	1-249-432-11	CARBON	18K	5% 1/4W
△R313	1-212-889-00	FUSIBLE	220 5%	1/4W F	R405	1-247-229-00	CARBON	360	5% 1/2W
△R314	1-212-865-00	FUSIBLE	22 5%	1/4W F	R406	1-247-229-00	CARBON	360	5% 1/2W
R315	1-247-711-11	CARBON	680 5%	1/4W F	R407	1-247-229-00	CARBON	360	5% 1/2W
R316	1-247-706-11	CARBON	330 5%	1/4W F	R601	1-247-754-11	CARBON	1.5K	5% 1/2W
△R317	1-212-857-00	FUSIBLE	10 5%	1/4W F	R602	1-247-754-11	CARBON	1.5K	5% 1/2W
△R318	1-212-857-00	FUSIBLE	10 5%	1/4W F	R605	1-249-429-11	CARBON	10K	5% 1/4W

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R606	1-249-429-11	CARBON	10K	5%	1/4W
< VARIABLE RESISTOR >					
RV301	1-241-761-11	RES, ADJ, CARBON 1K			
RV351	1-241-761-11	RES, ADJ, CARBON 1K			
< RELAY >					
RY401	1-515-920-11	RELAY (24V)			
< THERMISTOR(POSITIVE) >					
THP601	1-806-882-11	THERMISTOR, POSITIVE 2.2 (AEP2)			
THP602	1-806-882-11	THERMISTOR, POSITIVE 2.2 (AEP2)			
< TEST PIN >					
* TP301	1-564-506-11	PLUG, CONNECTOR 3P			
* TP351	1-564-506-11	PLUG, CONNECTOR 3P			

* 1-652-525-11	OUTLET BOARD				

< JACK >					
△CNJ1	1-526-794-11	OUTLET, AC			
△CNJ2	1-526-794-11	OUTLET, AC			
△CNJ3	1-526-794-11	OUTLET, AC			

* A-4371-023-A	PANEL BOARD, COMPLETE				

< CAPACITOR >					
C201	1-130-467-00	MYLAR	470PF	5%	50V
C202	1-136-161-00	FILM	0.047uF	5%	50V
C203	1-126-163-11	ELECT	4.7uF	20%	50V
C204	1-162-282-31	CERAMIC	100PF	10%	50V
C205	1-162-215-31	CERAMIC	47PF	5%	50V
C206	1-126-163-11	ELECT	4.7uF	20%	50V
C207	1-136-154-00	FILM	0.012uF	5%	50V
C208	1-136-154-00	FILM	0.012uF	5%	50V
C209	1-130-473-00	MYLAR	0.0015uF	5%	50V
C211	1-124-907-11	ELECT	10uF	20%	50V
C212	1-124-907-11	ELECT	10uF	20%	50V
C214	1-164-159-11	CERAMIC	0.1uF		50V
C215	1-164-159-11	CERAMIC	0.1uF		50V
C251	1-130-467-00	MYLAR	470PF	5%	50V
C252	1-136-161-00	FILM	0.047uF	5%	50V
C253	1-126-163-11	ELECT	4.7uF	20%	50V
C254	1-162-282-31	CERAMIC	100PF	10%	50V
C255	1-162-215-31	CERAMIC	47PF	5%	50V

Ref. No.	Part No.	Description			Remark
C256	1-126-163-11	ELECT	4.7uF	20%	50V
C257	1-136-154-00	FILM	0.012uF	5%	50V

C258	1-136-154-00	FILM	0.012uF	5%	50V
C259	1-130-473-00	MYLAR	0.0015uF	5%	50V
C701	1-162-207-31	CERAMIC	22PF	5%	50V
C702	1-162-207-31	CERAMIC	22PF	5%	50V
C703	1-162-282-31	CERAMIC	100PF	10%	50V
C704	1-164-159-11	CERAMIC	0.1uF		50V
C705	1-164-159-11	CERAMIC	0.1uF		50V
C706	1-124-907-11	ELECT	10uF	20%	50V
C707	1-162-294-31	CERAMIC	0.001uF	10%	50V

< CONNECTOR >					
CN704	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
* CNJ202	1-568-451-11	HOUSING, CONNECTOR (PC BOARD) 10P			
CNP701	1-766-257-11	PIN, CONNECTOR (PC BOARD) 10P			

< DIODE >					
D701	8-719-987-63	DIODE	1N4148M		
D702	8-719-987-63	DIODE	1N4148M		
D703	8-719-987-63	DIODE	1N4148M		
D704	8-719-987-63	DIODE	1N4148M		
D705	8-719-987-63	DIODE	1N4148M		
D706	8-719-987-63	DIODE	1N4148M		
D716	8-719-987-63	DIODE	1N4148M		
D717	8-719-987-63	DIODE	1N4148M		
D718	8-719-987-63	DIODE	1N4148M		
D719	8-719-987-63	DIODE	1N4148M		
D720	8-719-987-63	DIODE	1N4148M		
D721	8-719-987-63	DIODE	1N4148M		
D722	8-719-987-63	DIODE	1N4148M		
D723	8-719-024-99	DIODE	11ES2-NTA2B		

< IC >					
IC201	8-759-634-50	IC	M5218AL		
IC202	8-759-634-50	IC	M5218AL		
IC701	8-759-711-78	IC	TMP47C200BN-H307		
IC702	8-759-188-67	IC	X24C01P-S		
IC703	8-759-635-63	IC	M51943BSL		
IC704	8-759-962-08	IC	BA6208		

< TRANSISTOR >					
Q202	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q701	8-729-900-63	TRANSISTOR	DTA124ES		
Q702	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q703	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q704	8-729-900-63	TRANSISTOR	DTA124ES		
Q705	8-729-900-63	TRANSISTOR	DTA124ES		

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

PANEL

POWER-SW PS

Ref. No.	Part No.	Description			Remark
Q706	8-729-900-36	TRANSISTOR	DTC124ES		
Q707	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q708	8-729-119-76	TRANSISTOR	2SA1175-HFE		
< RESISTOR >					
R201	1-246-545-00	CARBON	1.0M 5%	1/4W	
R202	1-247-725-11	CARBON	10K 5%	1/4W F	
R203	1-247-725-11	CARBON	10K 5%	1/4W F	
R204	1-247-725-11	CARBON	10K 5%	1/4W F	
R205	1-247-725-11	CARBON	10K 5%	1/4W F	
R206	1-247-700-11	CARBON	100 5%	1/4W F	
R207	1-249-497-11	CARBON	33K 5%	1/4W	
R208	1-249-497-11	CARBON	33K 5%	1/4W	
R209	1-247-152-00	CARBON	8.2K 5%	1/4W	
R210	1-247-706-11	CARBON	330 5%	1/4W F	
R217	1-249-441-11	CARBON	100K 5%	1/4W	
R218	1-249-425-11	CARBON	4.7K 5%	1/4W F	
R219	1-249-431-11	CARBON	15K 5%	1/4W	
R220	1-249-422-11	CARBON	2.7K 5%	1/4W F	
R221	1-249-413-11	CARBON	470 5%	1/4W F	
R251	1-246-545-00	CARBON	1.0M 5%	1/4W	
R252	1-247-725-11	CARBON	10K 5%	1/4W F	
R253	1-247-725-11	CARBON	10K 5%	1/4W F	
R254	1-247-725-11	CARBON	10K 5%	1/4W F	
R255	1-247-725-11	CARBON	10K 5%	1/4W F	
R256	1-247-700-11	CARBON	100 5%	1/4W F	
R257	1-249-497-11	CARBON	33K 5%	1/4W	
R258	1-249-497-11	CARBON	33K 5%	1/4W	
R259	1-247-152-00	CARBON	8.2K 5%	1/4W	
R260	1-247-706-11	CARBON	330 5%	1/4W F	
R701	1-249-429-11	CARBON	10K 5%	1/4W	
R702	1-249-429-11	CARBON	10K 5%	1/4W	
R703	1-249-425-11	CARBON	4.7K 5%	1/4W F	
R704	1-249-425-11	CARBON	4.7K 5%	1/4W F	
R705	1-249-425-11	CARBON	4.7K 5%	1/4W F	
R706	1-249-433-11	CARBON	22K 5%	1/4W	
R707	1-249-433-11	CARBON	22K 5%	1/4W	
R708	1-249-433-11	CARBON	22K 5%	1/4W	
R709	1-249-433-11	CARBON	22K 5%	1/4W	
R710	1-249-433-11	CARBON	22K 5%	1/4W	
R711	1-249-433-11	CARBON	22K 5%	1/4W	
R715	1-247-818-11	CARBON	300 5%	1/4W	
R716	1-249-433-11	CARBON	22K 5%	1/4W	
R717	1-249-433-11	CARBON	22K 5%	1/4W	
R718	1-249-429-11	CARBON	10K 5%	1/4W	
R719	1-249-433-11	CARBON	22K 5%	1/4W	
R720	1-249-433-11	CARBON	22K 5%	1/4W	
R721	1-249-433-11	CARBON	22K 5%	1/4W	
R722	1-249-425-11	CARBON	4.7K 5%	1/4W F	

Ref. No.	Part No.	Description			Remark
R723	1-249-425-11	CARBON	4.7K 5%	1/4W F	
R724	1-249-425-11	CARBON	4.7K 5%	1/4W F	
R725	1-249-425-11	CARBON	4.7K 5%	1/4W F	
R728	1-249-433-11	CARBON	22K 5%	1/4W	
R729	1-249-433-11	CARBON	22K 5%	1/4W	
R730	1-249-429-11	CARBON	10K 5%	1/4W	
< VARIABLE RESISTOR >					
RV202	1-223-657-11	RES, VAR, CARBON	100K/100K (TREBLE)		
RV203	1-223-657-11	RES, VAR, CARBON	100K/100K (BASS)		
RV204	1-223-658-11	RES, VAR, CARBON	100K/100K (BALANCE)		
< SWITCH >					
S201	1-571-112-21	SWITCH, PUSH (1 KEY) (LOUDNESS)			
S202	1-572-642-11	SWITCH, PUSH (1 KEY) (SOURCE DIRECT)			
S701	1-692-967-11	SWITCH, ROTARY (INPUT SELECTOR)			
S704	1-571-112-21	SWITCH, PUSH (1 KEY) (EON LINK)			
< VIBRATOR >					
X701	1-579-223-11	OSCILLATOR, CERAMIC (8MHz)			

*	1-652-524-11	POWER-SW BOARD			

< CONNECTOR >					
CN703	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
< DIODE >					
D715	8-719-301-37	LED	SEL2210S-CD (STANDBY)		
< IC >					
IC705	8-749-923-43	IC	GP1U57XB		
< SWITCH >					
S702	1-554-303-21	SWITCH, TACTILE (POWER)			

*	1-652-532-11	PS BOARD			

1-533-233-11 HOLDER, FUSE					
< CAPACITOR >					
▲C1	1-161-741-00	CERAMIC	0.001uF	10%	400V
C801	1-136-153-00	FILM	0.01uF	5%	50V
C802	1-124-557-11	ELECT	1000uF	20%	25V
C803	1-124-477-11	ELECT	47uF	20%	25V
C804	1-162-294-31	CERAMIC	0.001uF	10%	50V

The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

PS **SP** **TRANS** **VOLUME**

Ref. No.	Part No.	Description	Remark		
C805	1-162-294-31	CERAMIC	0.001uF	10%	50V
C806	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

CN1	1-580-230-11	PIN, CONNECTOR (PC BOARD)	3P
CN2	1-564-321-00	PIN, CONNECTOR 2P	
CN3	1-580-629-11	PIN, CONNECTOR 2P	
CN801	1-691-766-11	PLUG (MICRO CONNECTOR)	4P
CNJ802	1-566-212-11	PIN, CONNECTOR 3P	

< DIODE >

D801	8-719-024-99	DIODE	11ES2-NTA2B
D802	8-719-024-99	DIODE	11ES2-NTA2B
D803	8-719-024-99	DIODE	11ES2-NTA2B
D804	8-719-024-99	DIODE	11ES2-NTA2B
D805	8-719-987-63	DIODE	1N4148M

< FUSE >

△F1	1-532-286-00	FUSE (T1. 6A)
△F2	1-532-259-00	FUSE (T2. 5A)

< IC >

IC801	8-759-231-53	IC	TA7805S
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< TRANSISTOR >

Q801	8-729-620-05	TRANSISTOR	2SC2603-EF
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< RESISTOR >

R801	1-249-425-11	CARBON	4.7K	5%	1/4W F
R802	1-247-735-11	CARBON	47	5%	1/2W F

< RELAY >

RY801	1-755-018-11	RELAY
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< TRANSFORMER >

△T2	1-449-071-21	TRANSFORMER, POWER
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*	1-652-531-11	SP BOARD
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< CAPACITOR >

C501	1-136-157-00	FILM	0.022uF	5%	50V (German)
C502	1-136-157-00	FILM	0.022uF	5%	50V (German)
C503	1-162-290-31	CERAMIC	470PF	10%	50V (German)
C551	1-136-157-00	FILM	0.022uF	5%	50V (German)
C552	1-136-157-00	FILM	0.022uF	5%	50V (German)
C553	1-162-290-31	CERAMIC	470PF	10%	50V (German)

Ref. No.	Part No.	Description	Remark		
		< CONNECTOR >			

CN503	1-691-768-11	PLUG (MICRO CONNECTOR)	6P
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< RESISTOR >

R503	1-247-727-11	CARBON	10	5%	1/2W (German)
R504	1-247-727-11	CARBON	10	5%	1/2W (German)
R553	1-247-727-11	CARBON	10	5%	1/2W (German)
R554	1-247-727-11	CARBON	10	5%	1/2W (German)

< TERMINAL >

* TM501	1-537-519-11	TERMINAL BOARD (SP) (SPEAKER)	(AEP1)
* TM501	1-537-699-11	TERMINAL BOARD (SP) (SPEAKER)	(German)
* TM501	1-537-762-11	TERMINAL BOARD (SP) (SPEAKER)	(AEP2)

*****	1-652-526-11	TRANS BOARD
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< CAPACITOR >

C601	1-106-379-12	MYLAR	0.033uF	5%	200V (AEP1, AEP2)
C601	1-108-702-11	MYLAR	0.068uF	10%	100V (German)
C602	1-106-379-12	MYLAR	0.033uF	5%	200V (AEP1, AEP2)

C602	1-108-702-11	MYLAR	0.068uF	10%	100V (German)
C614	1-108-702-11	MYLAR	0.068uF	10%	100V (German)
C615	1-108-702-11	MYLAR	0.068uF	10%	100V (German)

< CONNECTOR >

CN601	1-691-767-11	PLUG (MICRO CONNECTOR)	5P
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< DIODE >

D401	8-719-024-99	DIODE	11ES2-NTA2B
D601	8-719-302-38	DIODE	RBV-602-01

< RESISTOR >

R408	1-249-437-11	CARBON	47K	5%	1/4W
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*	1-652-528-11	VOLUME BOARD
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< CAPACITOR >

C213	1-136-165-00	FILM	0.1uF	5%	50V
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< CONNECTOR >

* CNP202	1-568-455-11	PIN, CONNECTOR (PC BOARD)	10P
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The components identified by mark **△** or dotted line with mark **△** are critical for safety. Replace only with part number specified.

VOLUME

Ref. No.	Part No.	Description	Remark
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< VARIABLE RESISTOR >

RV201 1-223-656-11 RES, VAR, CARBON 120K/120K (VOLUME)

MISCELLANEOUS

△62	1-575-651-21 CORD, POWER
△T1	1-426-797-11 TRANSFORMER, POWER

ACCESSORIES & PACKING MATERIALS

1-693-131-11 REMOTE COMMANDER (RM-S311)
2-181-754-21 COVER, BATTERY
3-758-606-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP1, AEP2)
3-758-606-41 MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP1, AEP2)

3-758-606-51 MANUAL, INSTRUCTION (GERMAN) (German)

* 4-967-234-01 INDIVIDUAL CARTON

* 4-967-239-01 CUSHION

HARDWARE LIST

#1	7-682-548-09 SCREW +BVTT 3X8 (S)
#2	7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3
#3	7-685-546-19 SCREW +BTP 3X8 TYPE2 N-S
#4	7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3

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